

IN THE CLAIMS

1. (Currently Amended) A signaling network processing device comprising:
a network interface for coupling to a network; and
a processor coupled with the network interface, wherein the processor is adapted to:
establish a call manager connection with a call manager;
exchange signaling messages over the call manager connection to establish a
communicative connection with an endpoint other than the call manager, the signaling messages
not including any voice data;

analyze the received audio content to identify a portion having a periodic signal;

analyze received audio content to determine whether the received audio content includes
a periodic signal;

generate a warning packet to signal the endpoint to turn off acoustic echo canceller
adaptation;

generate a clear packet to signal the endpoint to turn on acoustic echo canceller
adaptation;

transmit a representation of the received audio content; and

transmit the warning packet and the clear packet directly to the endpoint separately and
independently from the representation of received the audio content.

transmit to the endpoint through the communicative connection data packets representing
the received audio content;

transmit to the endpoint through the communicative connection a warning signal if the
received audio content includes the periodic signal.

2. (Previously Presented) The signaling network processing device of claim 1, wherein
analyzing the received audio content is performed by looking ahead.

3. (Previously Presented) The signaling network processing device of claim 1, wherein
the periodic signal has a double periodicity.

4. (Previously Presented) The signaling network processing device of claim 1, wherein the warning signal is in-band.

5. (Previously Presented) The signaling network processing device of claim 1, wherein the warning signal is out of band.

6. (Previously Presented) The signaling network processing device of claim 5, wherein the warning signal is a named signaling event.

7. (Cancelled)

8. (Currently Amended) The signaling network processing device of claim 1, the processor is further adapted to:

determine a duration of the periodic signal; and
encode the duration in the warning packet signal.

9. (Currently Amended) A signaling network call manager comprising:
a network interface for coupling to a network; and
a processor coupled with the network interface, wherein the processor is adapted to
establish a first network call manager connection with a network device, the first network call manager connection being an out of band connection;
establish a second network call manager connection with a telephone endpoint including an IP telephone with an acoustic echo canceller, the second call manager connection being an out of band connection;

~~assist the network device in establishing an exchange signaling over the first and second network call manager connections to establish a~~ communicative connection through a packet switched network to the telephone endpoint, the communicative connection being an in band connection and used by the network device to transmit voice data to the telephone endpoint;

generate one of a first periodic signal and an instruction for a second periodic signal to be played by the telephone endpoint;

encode a time duration of one of the first periodic signal and the second periodic signal in a warning signal;

transmit the warning signal in at least one packet through the second network call manager connection to be received by the IP telephone with the acoustic echo canceller; and

transmit the generated one of the first periodic signal and the instruction through the second network call manager connection;

wherein the voice data is not transmitted through either the first or second network call manager connection.

10. (Previously Presented) The signaling network call manager of claim 9, wherein one of the first and second periodic signals has a double periodicity.

11. (Previously Presented) The signaling network call manager of claim 9, the processor is further adapted to:

identify a type of one of the first periodic signal and the second periodic signal; and
determine the time duration from the identified type.

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Currently Amended) A device comprising:

means for establishing a signaling path with a call manager;

means for exchanging communications over the signaling path with the call manager to establish a communicative connection through a packet switched network to an endpoint, the endpoint being physically separate from the call manager;

means for ~~identifying detecting whether received audio content includes~~ a periodic signal
included in received audio content;

means for identifying a duration of the periodic signal;

means for generating a warning packet that encodes the duration of the periodic signal;

and

means for transmitting the warning packet to the endpoint.

means for transmitting through the communicative connection data packets that represent the received audio content;

means for transmitting through the communicative connection a warning signal when the periodic signal is detected in the received audio content.

19. (Currently Amended) The device of claim 18, wherein the means for identifying detecting whether the received audio content includes the periodic signal is adapted to look ahead is performed by looking ahead.

20. (Original) The device of claim 18, wherein the periodic signal has a double periodicity.

21. (Currently Amended) The device of claim 18, wherein the warning packet signal is transmitted in-band.

22. (Currently Amended) The device of claim 18, wherein the warning packet signal is transmitted out of band.

23. (Original) The device of claim 22, wherein the warning signal is a named signaling event.

24. (Original) The device of claim 18, further comprising:
means for determining an ending of the periodic signal; and
means for transmitting a clear signal corresponding to the ending.

25. (Cancelled)

26. (Currently Amended) A device comprising:

means for establishing a first network call manager connection with a gateway that couples a non packet switched network to a packet switched network;

means for establishing a second network call manager connection with a telephone endpoint;

means for ~~assisting the~~ exchanging communications over the first and second network call manager connections to assist a gateway in establishing a call through the packet switched network to the telephone endpoint;

means for generating one of a first periodic signal and an instruction for a second periodic signal to be played by the telephone endpoint;

means for encoding a time duration of one of the first periodic signal and the second periodic signal in a warning signal;

means for transmitting the warning signal in at least one packet through the second network call manager connection to be received by the telephone endpoint; and

means for transmitting the generated one of the first periodic signal and the instruction through the second network call manager connection to be received by the telephone endpoint.

27. (Original) The device of claim 26, wherein one of the first and second periodic signals has a double periodicity.

28. (Original) The device of claim 26, further comprising:

means for identifying a type of one of the first periodic signal and the second periodic signal; and

means for determining the time duration from the identified type.

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Currently Amended) An article comprising:
a storage medium, said storage medium having stored thereon instructions, that, when executed by at least one device, result in:
exchanging signaling messages over ~~[[the]]~~ a call manager connection to establish a communicative connection with an endpoint;
analyzing received audio content to determine whether the received audio content includes a periodic signal;
transmitting to the endpoint through the communicative connection data packets representing the received audio content; ~~and~~
~~transmit~~ transmitting to the endpoint through the communicative connection a warning packet and a clear packet to respectively signal a beginning and an end of the periodic signal included in the data packets; a warning signal if the received audio content includes the periodic signal;
wherein the warning and clear packets are transmitted from the at least one device to the endpoint independently of the data packets representing the received audio content.

33. (Previously Presented) The article of claim 32, wherein analyzing the received audio content is performed by looking ahead.

34. (Cancelled)

35. (Currently Amended) The article of claim 32, wherein the instructions further result in:
determining a duration of the periodic signal; and
encoding the duration in the warning packet signal.

36. (Currently Amended) An article comprising:
a storage medium, said storage medium having stored thereon instructions, that, when executed by at least one device, result in:
establishing a first network call manager connection with a network device;

establishing a second network call manager connection with a telephone endpoint including an IP telephone with an acoustic echo canceller;

~~assist the network device in establishing~~ exchanging communications over the second network call manager connection to cause a communicative connection to be established from the network device through a packet switched network to the telephone endpoint;

generating one of a first periodic signal and an instruction for a second periodic signal to be played by the telephone endpoint;

encoding a time duration of one of the first periodic signal and the second periodic signal in a warning signal;

transmit the warning signal in at least one packet through the second network call manager connection to be received by the IP telephone with the acoustic echo canceller; and

transmitting the generated one of the first periodic signal and the instruction through the second network call manager connection.

37. (Original) The article of claim 36, wherein one of the first and second periodic signals has a double periodicity.

38. (Original) The article of claim 36, wherein the instructions further result in: identifying a type of one of the first periodic signal and the second periodic signal; and determining the time duration from the identified type.

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

43. (Cancelled)

44. (Cancelled)

45. (Currently Amended) A method of operating a gateway that separates a packet switched network and a circuit switched network, said method comprising:
exchanging signaling over the packet switched network and between the gateway and a call manager to establish establishing a first connection with an endpoint through [[a]] the packet switched network;
receiving audio content from the circuit switched network;
establishing a second connection;
receiving audio content through the second connection;
transmitting to the endpoint through the first connection data packets that contain an encoded form of the received audio content;
analyzing the audio content for a periodic signal; and
transmitting a warning signal through the connection over the packet switched network when a periodic signal is identified;
if a periodic signal is detected in the audio content, transmitting through the first connection a warning signal;
wherein the data packets and the warning signal are addressed independently of an address for the call manager.

46. (Original) The method of claim 45, wherein
analyzing the audio content is performed by looking ahead.

47. (Original) The method of claim 45, wherein
the periodic signal has a double periodicity.

48. (Original) The method of claim 45, wherein
the warning signal is in-band.

49. (Original) The method of claim 45, wherein
the warning signal is out of band.

50. (Original) The method of claim 49, wherein the warning signal is a named signaling event.

51. (Original) The method of claim 45, further comprising:
determining an ending of the periodic signal; and
transmitting a clear signal corresponding to the ending.

52. (Original) The method of claim 45, further comprising:
determining a duration of the periodic signal; and
encoding the duration in the warning signal.

53. (Previously Presented) A method comprising:
establishing a first network call manager connection that does not transmit voice data with a network device;
establishing a second network call manager connection that does not transmit voice data with an endpoint;
exchanging Session Initiation Protocol (SIP) signaling messages over the first and second call manager connections to assist the network device in establishing a communication connection with the endpoint through a packet switched network;
generating one of a first periodic signal and an instruction for a second periodic signal to be played by an IP telephone associated with the endpoint;
encoding a time duration of one of the first periodic signal and the second periodic signal in a warning signal;
transmitting the warning signal in at least one packet through the second call manager connection to be received by the IP telephone that includes an acoustic echo canceller; and
transmitting the generated one of the first periodic signal and the instruction through the second call manager connection.

54. (Original) The method of claim 53, wherein one of the first and second periodic signals has a double periodicity.

55. (Original) The method of claim 53, further comprising:
identifying a type of one of the first periodic signal and the second periodic signal; and
determining the time duration from the identified type.

56. (Cancelled)

57. (Cancelled)

58. (Cancelled)

59. (Cancelled)

60. (Cancelled)

61. (Cancelled)

62. (Cancelled)

63. (New) The signaling network processing device of claim 1 wherein the endpoint
receives the representation of the audio content and the packets separately and independently.